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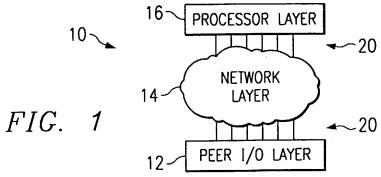
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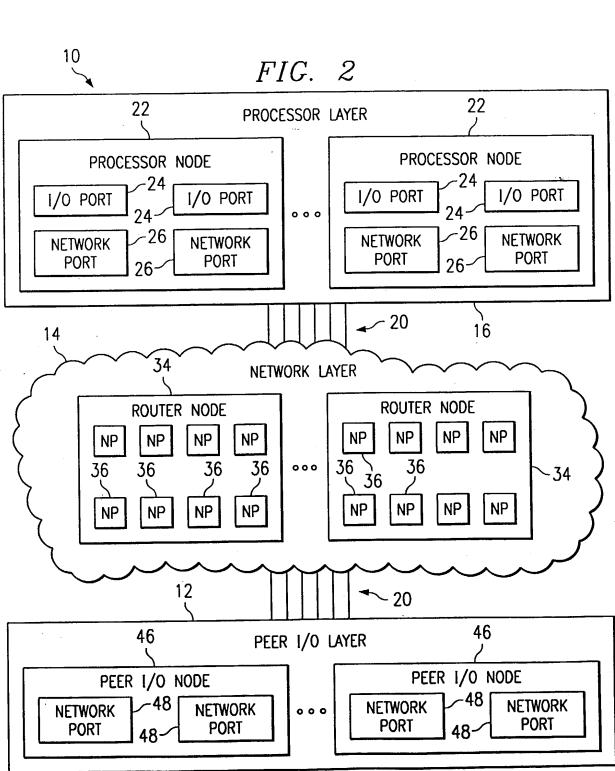
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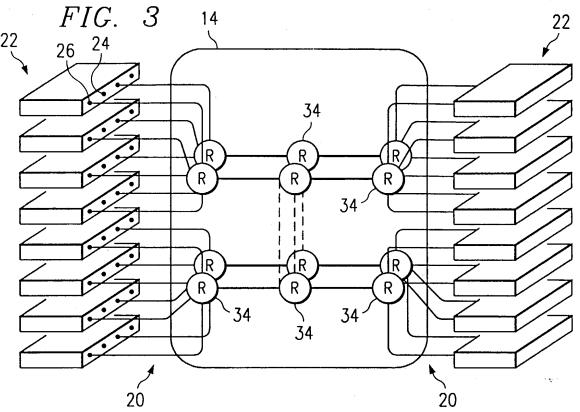
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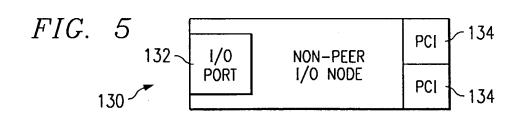


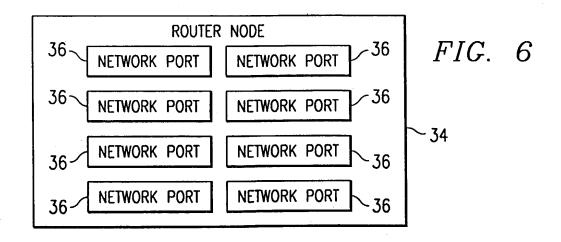


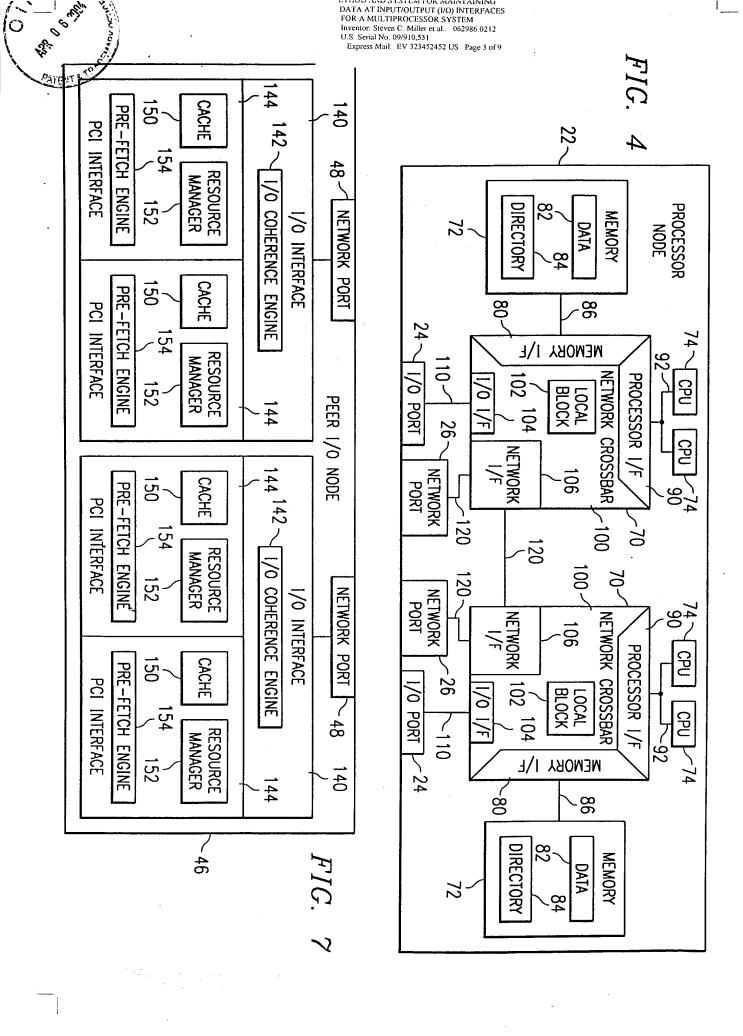
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PAT & TO ACTUAL

ETHOD AND SYSTEM FOR MAINTAINING DATA AT INPUT/OUTPUT (I/O) INTERFACES FOR A MULTIPROCESSOR SYSTEM Inventor: Steven C. Miller et al. 062986.0212 U.S. Serial No. 09/910,531 Express Mail: EV 323452452 US Page 4 of 9

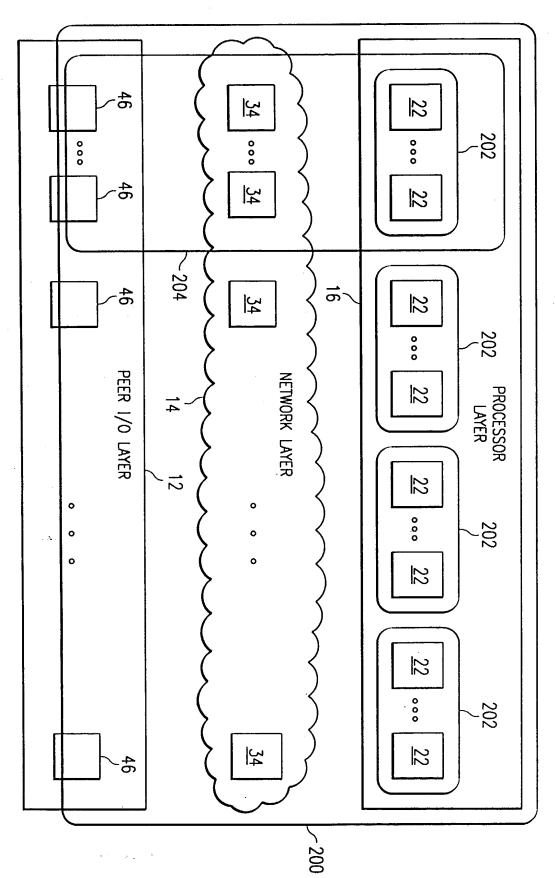


FIG. 8

DATA AT INPUT/OUTPUT (I/O) INTERFACES FOR A MULTIPROCESSOR SYSTEM Inventor: Steven C. Miller et al. 062986.0212 U.S. Serial No. 09/910,531 Express Mail: EV 323452452 US Page 5 of 9

SE VCS	•			ress Mail: EV 323452452 US Page 5 of 9
IN O S PHANE		902	904	906
PATENT & TO PERIOD	GROUP		NAME	DESCRIPTION
		SHARED	READ	READ
			RDSHD	READ SHARED
		EXCLUSIVE	RDEXC	READ EXCLUSIVE
			RDXRO	EXCLUSIVE READ-ONLY TIMED
910	READ		RDXRN	EXCLUSIVE READ-ONLY UNTIMED
310	ॡ	GET	GET	READ INVALID
			GETF	READ INVALID, FORCED
·		etc.	AMOR	ATOMIC MEMORY OPERATION, READ
			NCRD	NON-COHERENT READ
		WRITEBACK	WRBK	WRITEBACK
			WRBKR	WRITEBACK, CONCURRENT READ OUTSTANDING
			IWE	IMPLICIT WRITEBACK EXCLUSIVE
			RQSH	CEX DROP (RELINQUISH)
245	l E		RQSHR	CEX DROP, CONCURRENT READ OUTSTANDING
912	WRITE	PUT	PUT	WRITE INVALIDATE
			PFCL	CACHE LINE FLUSH
		ETC.	AMOW	ATOMIC MEMORY OPERATION, WRITE
			NCWRD	NON-COHERENT WRITE, DOUBLEWORD
•	<u> </u>		NCWRF	NON-COHERENT WRITE, CACHE LINE
		SHARED	INTER	INTERVENTION SHARED
		EXCLUSIVE	INEXC	INTERVENTION EXCLUSIVE
	بير		FLSH	FLUSH
914	PROBE		ERASE	ERASE
		GET	ININV	INTERVENTION INVALID
			ININF	INTERVENTION INVALID, FORCED
	, 	ETC.	INVAL	INVALIDATE SOUR ASSETS SOUR
916	\ \rac{1}{2}	INVAL ENERATION	BINEV	BACKOFF INVALIDATE ECHO, VECTOR FORMAT
	CINCION		LINW	LOCAL BLOCK INVALIDATE VECTOR

FIG. 9

ETHOD AND SYSTEM FOR MAINTAINING DATA AT INPUT/OUTPUT (I/O) INTERFACES FOR A MULTIPROCESSOR SYSTEM Inventor: Steven C. Miller et al. 062986.0212 U.S. Serial No. 09/910,531 Express Mail: EV 323452452 US Page 6 of 9

	X '	002	1004	1006 FIG. 1	OA	
ſ		GROUP	NAME	DESCRIPTION]	
1010 NRITE READ				SHARED REPLY	1	
				SHARED RESPONSE	1010a 1010b 1010c 1010d 1012a	
		SHARED		SHARED ACKNOWLEDGE		
				BACKOFF INTERVENTION SHARED		
			ERPLY	EXCLUSIVE REPLY		
			ESPEC	EXCLUSIVE SPECULATIVE REPLY		
			ERESP	EXCLUSIVE RESPONSE		
			EACK	EXCLUSIVE ACKNOWLEDGE		
		EXCLUSIVE	ERPYP	EXCLUSIVE REPLY, SEND PRGE		
			BIEXC	BACKOFF INTERVENTION EXCLUSIVE		
	Q		BINW	BACKOFF INVALIDATE, VECTOR FORMAT		
	REA		BINVP	BACKOFF INVALIDATE, POINTER FORMAT		
		GET	IRPLY	INVALID REPLY		
			ISPEC	INVALID SPECULATIVE REPLY		
			IRESP	INVALID RESPONSE		
			IACK	INVALID ACKNOWLEDGE		
			NACKG	NEGATIVE ACKNOWLEDGE TO GET		
			BIINV	BACKOFF INTERVENTION INVALID		
	! :		BIINF	BACKOFF INTERVENTION INVALID FORCED		
		ETC.	AARP	AMO READ REPLY		
			NCRP	NON-COHERENT READ REPLY		
			NACK	COHERENT READ NEGATIVE ACKNOWLEDGE		
	T.	WRITEBACK	WBACK			
		THE BROKE	WBBACK	WRITEBACK BUSY ACKNOWLEDGE		
		PUT	WACK	WRITE INVALIDATE ACKNOWLEDGE		
	WRI		WACKP	WRITE INVALIDATE ACK, SEND PRGE		
			WNACK	WRITE INVALIDATE NEGATIVE ACKNOWLEDGE		
	1	1	1 1 1	1		

TO FIG. 10B

1000

FIG. 10B

FROM FIG. 10A

